REMARKS

Claims 1-5 and 7-20 are in the case, and claims 9-20 have been withdrawn from consideration. Claims 1-5 and 7-8 are rejected under 35 USC § 112. Claims 1-5 and 7-8 are rejected under 35 USC § 102 over USPN 5,591,269 to Arami et al. Claims 1, 3-4, and 7-8 are rejected under 35 USC § 102 over USPN 5,435,379 to Moslehi et al. Claims 1-3, 5, and 7-8 are rejected under 35 USC § 103 over Muller et al. in view of Arami et al. The rejections are respectfully traversed. Reconsideration and allowance of the claims are respectfully requested.

CLAIM REJECTIONS UNDER § 112

Claims 1-5 and 7-8 are rejected under 35 USC § 112 for being indefinite. Claim 1 provides, *inter alia*, a method that is followed "***when*** the sensed chuck temperature is outside of a desired temperature range." If the applicants understand correctly, the examiner asserts that the inclusion of if/then statements for conditional branching during such a temperature excursion renders the claim *prima facia* indefinite. Applicants respectfully assert that this interpretation is erroneous, and that conditional branching within a claim is not *prima facia* indefinite. The examiner considers the if/then statements as a Markush group. However, wording for a traditional Markush group is not used in the claim. Rather, wording indicating that the if/then statements are to be performed in ***sequential*** order is provide in the claim. Thus, applicants believe that the conditions for the if/then statements are clearly specified, and are not indefinite. Reconsideration and allowance of claim 1 and claims 2-5 and 7-8 which depend therefrom are respectfully requested.

COMMENTS ON EXAMINER'S RESPONSE TO ARGUMENTS

The examiner asserts that the controllers of Arami et al., Muller et al., and Moslehi et al. control all three of process energy, transfer media flow rate, and transfer media temperature. This conclusion is reached by the examiner defining the term "process energy." However, the examiner is not the appropriate person to make such a definition. The definition of a term used in the claim is left to the specification, and if

such a definition cannot be reasonably made by reference to the specification, then the plain meaning of the term is used. The definition of "process energy" as used in the specification does not at any point include the temperature of the chuck, nor does the plain meaning of "process energy" as it is used by those with skill in the art include the temperature of the chuck. Thus, the examiner is misconstruing the term to include every possible energy source there is, in order to support the rejection, when there is no indication that the term should be so construed. Such an action is impermissible.

CLAIM REJECTIONS UNDER § 102

Claims 1-5 and 7-8 are rejected under 35 U.S.C. 102 as being unpatentable over Arami et al. Independent claim 1 claims, *inter alia*, a method for controlling the temperature of a substrate by controlling with a controller a chuck temperature, including circulating under control of the controller a media through the chuck, sensing the chuck temperature, reporting the chuck temperature to the controller, where the controller is adapted to adjust the process energy, the media flow rate, and the media temperature, and when the chuck temperature is outside of a desired range, then using the controller to bring the chuck temperature within the desired range by sequentially adjusting, a first one of the media temperature and the media flow rate, if the chuck temperature is not within the desired temperature range, then adjusting a second one of the media temperature and the media flow rate that has not been previously adjusted, if the chuck temperature is still not within the desired temperature range, then adjusting the process energy until the chuck temperature is within the desired temperature range.

Thus, claim 1 requires several limitations as a part of the method. First, it requires the use of a controller that adapted to control at least three different things, being the process energy, the media flow rate, and the media temperature. Thus, if a method does not use such a controller to control the temperature of the substrate, then the present method as claimed does not read on that method. Further, if a method uses a controller to control the temperature of a substrate, but the controller is not adapted to control the process energy, the media flow rate, and the media temperature, then the present method as claimed does not read on that method. Second, claim 1, as a method claim, requires that the controller operates to control the temperature by taking specific actions in a

specific order. If a method does not take these same actions, or performs them in a different order, then the present method as claimed does not read on that method.

Applicants note that while a specific instance of the use of the method of claim 1 may not require that all of the media temperature, media flow rate, and process power be adjusted to control a temperature excursion, the method as claimed nonetheless requires the capacity to do all three. Further, the method as claimed requires the use of a controller that is adapted to accomplish all three sub methods of temperature control. As describe in more detail hereafter, none of the references, either alone or in combination, describe such a method.

Arami et al. do not describe such a method. Specifically, Arami et al. do not describe a method that uses a controller that is adapted to control all three of the process energy, the media flow rate, and the media temperature. Arami et al. do not adjust the temperature of the coolant, and neither do Arami et al. adjust the process power. It is again noted that the references to adjusting power in Arami et al. are in regard to the power supplied to the heater blocks 130, 131, and 132, which have nothing to do with the processing power. Further, Arami et al. do not describe first adjusting the temperature and flow rate of the media, and then only if that doesn't work to control the temperature by adjusting the process energy. Thus, the method described by Arami et al. is different from the method as claimed in claim 1.

Therefore, claim 1 patentably defines over Arami et al. Reconsideration and allowance of claim 1 are respectfully requested. Dependent claims 2-5 and 7-8 depend from independent claim 1, and contain additional important aspects of the invention. Therefore, dependent claims 2-5 and 7-8 patentably define over Arami et al. Reconsideration and allowance of dependent claims 2-5 and 7-8 are respectfully requested.

Claims 1, 3-4, and 7-8 are rejected under 35 USC § 102 over Moslehi et al. Independent claim 1 claims, *inter alia*, a method for controlling the temperature of a substrate by controlling with a controller a chuck temperature, including circulating under control of the controller a media through the chuck, sensing the chuck temperature, reporting the chuck temperature to the controller, where the controller is adapted to adjust the process energy, the media flow rate, and the media temperature, and when the chuck

temperature is outside of a desired range, then using the controller to bring the chuck temperature within the desired range by sequentially adjusting, a first one of the media temperature and the media flow rate, if the chuck temperature is not within the desired temperature range, then adjusting a second one of the media temperature and the media flow rate that has not been previously adjusted, if the chuck temperature is still not within the desired temperature range, then adjusting the process energy until the chuck temperature is within the desired temperature range.

Moslehi et al. do not describe such a method. Specifically, Moslehi et al. do not describe a method that uses a controller that is adapted to control all three of the process energy, the media flow rate, and the media temperature. Moslehi et al. do not adjust the flow rate of the chuck coolant, and neither do Moslehi et al. adjust the process power. Moslehi et al. do not describe first adjusting the temperature and flow rate of the media, and then only if that doesn't work to control the temperature by adjusting the process energy. Thus, the method described by Moslehi et al. is different from the method as claimed in claim 1.

Therefore, claim 1 patentably defines over Moslehi et al. Reconsideration and allowance of claim 1 are respectfully requested. Dependent claims 3-4 and 7-8 depend from independent claim 1, and contain additional important aspects of the invention. Therefore, dependent claims 3-4 and 7-8 patentably define over Moslehi et al. Reconsideration and allowance of dependent claims 3-4 and 7-8 are respectfully requested.

CLAIM REJECTIONS UNDER § 103

Claims 1-3, 5, and 7-8 are rejected under 35 U.S.C. 103 as being unpatentable over Muller et al. in view of Arami et al. Independent claim 1 claims, *inter alia*, a method for controlling the temperature of a substrate by controlling with a controller a chuck temperature, including circulating under control of the controller a media through the chuck, sensing the chuck temperature, reporting the chuck temperature to the controller, where the controller is adapted to adjust the process energy, the media flow rate, and the media temperature, and when the chuck temperature is outside of a desired range, then using the controller to bring the chuck temperature within the desired range

by sequentially adjusting, a first one of the media temperature and the media flow rate, if the chuck temperature is not within the desired temperature range, then adjusting a second one of the media temperature and the media flow rate that has not been previously adjusted, if the chuck temperature is still not within the desired temperature range, then adjusting the process energy until the chuck temperature is within the desired temperature range.

Muller et al. do not describe such a method. Specifically, Muller et al. do not describe a method that uses a controller that is adapted to control all three of the process energy, the media flow rate, and the media temperature. Muller et al. do not adjust the flow rate of the chuck coolant to adjust the temperature of the chuck. Further, Muller et al. do not describe first adjusting the temperature and flow rate of the media that is used to cool the chuck in order to control the temperature of the wafer, and then only if that doesn't work to control the temperature by adjusting the process energy. It is specifically noted that Muller et al. have no description whatsoever of combining any of the temperature control methods. Even in the claims, Muller et al. do not describe combining the temperature control methods in any way. Thus, Muller et al. do not describe any combination of temperature control methods, let alone the novel combination and order of temperature control methods as described in claim 1. For this reason, any argument as to the order of use of the temperature control methods being obvious is moot, because Muller et al. do not even use an order of temperature control methods. Instead, Muller et al. describe the separate and isolated use of alternate temperature control methods. Therefore, the method described by Muller et al. is different from the method as claimed in claim 1.

Arami et al. do not remedy the deficiencies of Muller et al. Specifically, Arami et al. do not describe a method that uses a controller that is adapted to control all three of the process energy, the media flow rate, and the media temperature. Arami et al. do not adjust the temperature of the chuck coolant to adjust the temperature of the chuck, neither do Arami et al. adjust the process power to adjust the temperature of the chuck. Further, Arami et al. do not describe first adjusting the temperature and flow rate of the media that is used to cool the chuck in order to control the temperature of the wafer, and then only if

that doesn't work to control the temperature by adjusting the process energy. Thus, the method described by Arami et al. is different from the method as claimed in claim 1.

Therefore, the combination of Muller et al. and Arami et al. do not describe the method as claimed in claim 1, and claim 1 patentably defines over Muller et al. in view of Arami et al. Reconsideration and allowance of claim 1 are respectfully requested. Dependent claims 2-3, 5, and 7-8 depend from independent claim 1, and contain additional important aspects of the invention. Therefore, dependent claims 2-3, 5, and 7-8 patentably define over Muller et al. in view of Arami et al. Reconsideration and allowance of dependent claims 2-3, 5, and 7-8 are respectfully requested.

ENTRY OF PRIOR AMENDMENTS BEFORE FILING OF RCE

Applicants previously requested that the prior amendments be entered even if they did not overcome all of the examiner's concerns. The examiner asserted that the amendments raised new issues, which applicants assumed would require further searching by the examiner. Thus, the applicants filed the RCE.

Applicants are, therefore, surprised that the examiner apparently has not done any additional searching, and has instead relied on the same rejections as previously made. In fact, the language of the examiner's rejections in the present office action are nearly verbatim those made in the prior office action. Applicants assert that ***any*** amendment would require some amount of further consideration, and that an assertion that further consideration is required is not a justifiable reason for requiring an RCE to be filed. Applicants respectfully request that the examiner please be more mindful in the future of the waste of resources that such decisions create. Patents are already outside of the financial reach of many inventors, and such decisions only make the acquisition of a patent further cost prohibitive.

CONCLUSION

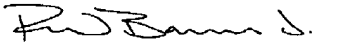
Applicants assert that the claims of the present application patentably define over the prior art made of record and not relied upon for the same reasons as given above. Applicants respectfully submit that a full and complete response to the office action is

provided herein, and that the application is now fully in condition for allowance. Action in accordance therewith is respectfully requested.

In the event this response is not timely filed, applicants hereby petition for the appropriate extension of time and request that the fee for the extension be charged to deposit account 12-2355. If other fees are required by this amendment, such as fees for additional claims, such fees may be charged to deposit account 12-2252. Should the examiner require further clarification of the invention, it is requested that s/he contact the undersigned before issuing the next office action.

Sincerely,

LUEDEKA, NEELY & GRAHAM, P.C.

By: 

Rick Barnes, 39,596